

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026989**Date Inspected:** 04-Jan-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. 12E/PP111/E3 Lifting Lug Hole W1 (Interior)
2. 12E/13E/A3 (Interior)
3. 12E/PP111/E4 Lifting Lug hole W2 Repair (Exterior)
4. 13E/14E/D3 (Exterior)

1. 12E/PP111/E3 Lifting Lug Hole W1 (Interior)

This QA Inspector randomly observed QC Inspector Fred Von Hoff performing Magnetic Particle (MT) inspection on the back gouge of face "B" of Lifting Lug hole 12E/PP111/E3/W1 located on the interior of the OBG. This QA Inspector verified that the welds were free of indications and found to be satisfactory. This QA Inspector observed the QC Inspector measure the pre-heat of the joint to verify a minimum of 10 degrees C had been achieved and this QA Inspector noted the utilization of E7018-H4R electrodes with Amperage of 135. This QA Inspector randomly observed ABF welder Salvador Sandoval (ID 2202) perform the Shielded Metal Arc Welding (SMAW) process in the (4G) overhead position. This QA Inspector observed the QC Inspector monitoring the inter-pass temperatures and the welding to ensure the parameters were in compliance pertaining to ABF-WPS-D15-1110A-Revision 1. This QA Inspector noted that the work was completed on this date and appeared to be in general compliance with the approved WPS and the contract specifications.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

12E/PP111/E3 Lifting Lug Hole W3 (Interior)

This QA Inspector randomly observed ABF welder Salvador Sandoval performing back-gouge operations on lifting lug hole W3 at 12E/PP111/E3 on the interior of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff test the back-gouge utilizing the MT method. This QA Inspector observed that Mr. Von Hoff found no rejectable indications and the work appeared to be in general conformance with the contract specifications.

This QA Inspector made random observations of ABF welder Salvador Sandoval (ID 2202) perform the SMAW process in the (4G) overhead position. This QA Inspector observed QC Inspector Fred Von Hoff measure the pre-heat temperature to verify a minimum of 150°F was achieved. This QA Inspector also observed the QC Inspector monitoring the welding and verifying that the parameters were in compliance pertaining to ABF-WPS-D15-1110A-Revision 1. The parameters were recorded as (Amperes=135) utilizing a 3.2 mm E7018-H4R electrode. During in process welding, this QA Inspector noted that the QC Inspector measured the inter-pass temperatures to maintain a heat range below 230°C. This QA Inspector made subsequent observations during the shift and noted that the work was completed on this date and appeared to be in general conformance to the contract specifications.

2. 12E/13E/A3 (Interior)

This QA Inspector randomly observed ABF welding operator James Zhen (ID 6001) performing the Flux Core Arc Welding with gas (FCAW-G) process utilizing a “Bug-O” motorized rail system with a magnetic base attached in the (4G) overhead position on face “B” of “A” deck plate at 12E/13E of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the welding to ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-3110-4. The parameters were recorded as (A=265/V=23.8/TS=180/HI=2.10). This QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work was in progress and appeared to be in general conformance to the contract requirements. This joint is a Seismic Performance Critical Member (SPCM).

3. 12E/PP111/E4 Lifting Lug hole W2 Repair (Exterior)

This QA Inspector randomly observed ABF welder Jorge Lopez performing the back-gouge operation of an ultrasonic rejectable indication on “A” deck Lifting Lug Hole 12E/PP111/E4/W2 located at “Y” 550 mm: (20 mm wide; 80 mm length; and 10 mm in depth). This QA Inspector observed QC Inspector Fred Von Hoff perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector verified that no rejectable indications were present.

This QA Inspector randomly observed ABF welder Jorge Lopez (Welder ID 6149) performing the repair welding operation of an ultrasonic indication as per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on “A” deck Lifting Lug Hole 12E/PP111/E4/W2. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Fred Von Hoff verify that the preheat temperature was at the minimum of 10 degrees C and that the welding parameters (Amps=135) were in accordance with WPS D1.5-1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

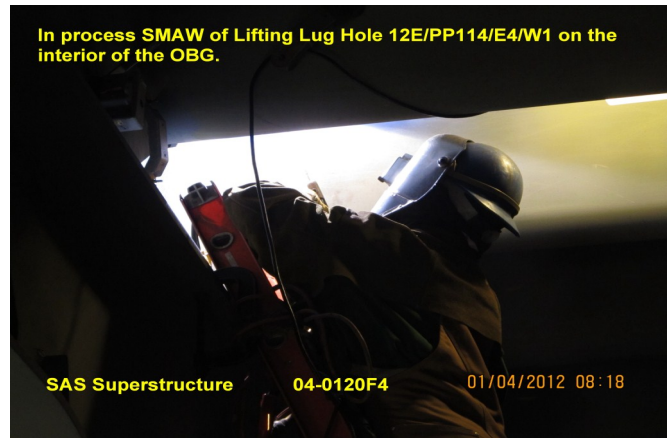
4. 13E/14E/D3 (Exterior)

This QA Inspector randomly observed ABF welding operator Wai Kit Lai (ID 2953) performing the Flux Core Arc Welding with gas (FCAW-G) process utilizing a “Bug-O” motorized rail system with a magnetic base attached in the (4G) overhead position on face “B” of bottom plate “D3”, at 13E/14E of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the welding to ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-3110-4. The parameters were recorded as (A=270/V=23.8/TS=180/HI=2.15). This QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work is in progress and appears to be in general conformance to the contract requirements. This joint is a Seismic Performance Critical Member (SPCM).

Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. The issues were noted by the QAI and the QA Lead Inspector concurs with the QA report.

Summary of Conversations:

The were no pertinent conversations to report.



Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

Inspected By:	Frey,Doug	Quality Assurance Inspector
---------------	-----------	-----------------------------

Reviewed By:	Levell,Bill	QA Reviewer
--------------	-------------	-------------